Porous, poly(DL-lactide-co-glycolide) (PLGA)-based material were prepared using a physicochemical method with solvent/non-solvent systems where obtained solutions have been centrifuged. Polyvinyl pyrrolidone was used as a surfactant and silicone oil, sodium chloride or paraffin as a porogen.

Poly(DL-lactide-co-glycolide) (PLGA) had a lactide-to-glycolide ratio of 50:50. Molecular weight of the polymer was 40,000-50,000 g/mol. The time for its complete resorption in the body is 4 to 8 weeks. Polyvinyl pyrrolidone (povidone, PVP) was obtained from Merck Chemicals Ltd (k-25, Merck, Germany).

The samples were characterized by Infrared Spectroscopy (IR) and Scanning Electron Microscopy (SEM).

**Conclusion**

The physicochemical method has produced non-agglomerated PLGA nanospheres with spherical and uniform shapes. In this study, porous poly(DL-lactide-co-glycolide) materials were fabricated using different porogens, silicon oil, paraffin or sodium chloride. SEM micrographs showed that porous PLGA scaffolds obtained in the experiment with sodium chloride as porogen and water as solvent of the porogen had apparently uniform pore morphology with spherical pores and well controlled three-dimensional interconnected network. PLGA scaffolds are highly porous with similar porosity values.